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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,888	12/05/2001	Ronald Huner	584.12-US1	5270

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ROBERT D. FISH; RUTAN & TUCKER, LLP  
P.O. BOX 1950  
611 ANTON BLVD., 14TH FLOOR  
COSTA MESA, CA 92628-1950

EXAMINER

FIORILLA, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/830,888

Applicant(s)

HUNER, RONALD

Examiner

Christopher A. Fiorilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

1. Claims 17,52 and all claims dependent therein are objected to because of the following informalities:

In claim 17, "low-melting" should be changed to "low melting" so that it corresponds with other claims 17 (e.g. claims 20 and 21) and the specification.

In claim 52, "Use" should be changed to "use".

Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 55 rejected under 35 U.S.C. 102(b) as being anticipated by Uenosono et al. (5,938,814).

Uenosono et al. teaches a sintered body containing MnS powder. See col. 13, lines 39-45.

4. Claims 17-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Storstrom (5,480,469).

Note that Storstrom et al. also discloses particle sizes within the claimed range (col. 5, line 66).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 17-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopra et al. (5,768,678) in view of Grady et al. (6,287,513) for the reasons as set forth in the previous office action and further:

Determination of the specific coating agent amount would have been well within the realm of routine experimentation to one having ordinary skill in the art at the time of the invention. These parameters would have obviously been selected to optimize the process conditions and/or the properties of the final product.

Note that Grady et al. discloses the use of polyamides (col. 7, line 28) as claimed in claims 20 and 21.

7. Applicant's arguments filed 10/14/03 have been fully considered but they are not persuasive.

**With respect to the rejection of claims under 35 USC 102 applicant argues:**

**With respect to the newly filed claims, the applicant points out that Storstrom et al. teach powder metallurgical mixtures containing a base metal powder, pulverulent additives, optionally a lubricant and a binder, wherein the binder is at least one diamide wax. In contrast to the present invention, no surface-modified manganese sulfide is mentioned by Storstrom et al. Moreover, Storstrom's binder is a diamide wax, which is clearly not part of the coating agent of the presently pending claims. More specifically, the coating agent of the presently pending claims is limited to a wax, an ester of an inorganic or organic acid, an oil, a low-melting polymer or a mono- to multi-functional aliphatic alcohol**

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with 2 to 12 carbon atoms or mixtures thereof. The specification defines waxes as esters of higher straight-chained fatty acids such as palmitic acid, hexacosanoic acid with higher straight-chained, monofunctional alcohols such as palmityl alcohol, stearyl alcohol or octadec-9-en-1-ol or such waxes as Japan wax, lanolin, beeswax or low-molecular polyethylene glycols and polypropylene glycols. Thus, the coating agents of the present claims are entirely inconsistent with the diamide wax of Storstrom et al. Consequently, claims 17-55 are not anticipated by nor obvious over Storstrom et al.

This argument is not persuasive. With respect to the statement that no surface modified manganese sulfide is mentioned by Storstrom et al. it is submitted that Storstrom et al. discloses mixing a MnS powder with a binder which melts and adheres to the particles. Thus, clearly the particles are surface modified. With respect to the specific type of wax used in Storstrom et al., it is submitted that the wax is encompassed by the generic term wax used in the claims and the specification. Pages 4 and 5 of the specification give examples of suitable waxes but do not limit the type of wax claimed. See e.g. page 4, line 35 which recites "One example..."

**With respect to the rejection of claims under 35 USC 103 applicant argues:**

With respect to the newly filed claims, the applicant points out that Chopra et al. teach machining aids based on a manganese sulfide composition, which contains besides manganese sulfide additionally iron. Example 18 discloses, that this composition can contain additionally a binder. Grady deals with a method of shaping powder metal parts, wherein the powder metal consists of iron or iron alloy and additionally a thermoplastic binder. According to the Examiner's opinion, the combination of the thermoplastic binder with the manganese sulfide composition of Chopra would lead the skilled man directly to the teaching of the present invention.

However, the applicant points out that neither Chopra nor Grady teach or suggest use of the coating agents as presently claimed. On the contrary, Chopra uses iron in his compositions, which clearly teaches away, if not even against the presently pending claims. Iron is simply inconsistent with meltable and evaporable coating agents as presently claimed.

Furthermore, Chopra et al. teach a process where manganese, sulfur and iron are reacted leading inter alia to manganese sulfide. Thus, no coating is described. According to example 18, a binder can be included in the use of said composition with a metal powder in a sinter process, i.e., such binder is added to the mixture of manganese sulfide, iron and metal. In contrast, the manganese sulfide according to the presently pending claims is coated first, and then used with a metal in a sinter process. Therefore, the newly filed claims are also not obvious over Chopra in view of Grady.

This argument is not persuasive. The examiner does not rely on Chopra's disclosure of iron as the coating material. Rather, the binder material of Chopra would constitute a coating material. Clearly, the examiner's reference to low melting polymer binders in the recitation of a secondary reference would show the examiner is comparing the binder of the references to the coating agent of the claims. With regard to applicant's statement that "the manganese sulfide according to the presently pending claims is coated first, and then used with a metal in a sinter process", it is submitted that this argument is not commensurate in scope with the claims. No such claim limitation is present.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is (571) 272-1187. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



**Christopher A. Fiorilla**  
**Primary Examiner**  
**Art Unit 1731**